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Notice of Allowability

Application No.

10/786,456

Examiner

Phillip A. Johnston

Applicant(s)

KRUEGER, CHRISTIAN

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 9-15-2005.
2. ☒ The allowed claim(s) is/are 1, 5-26 and 30-38.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 12-8-2005.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Detailed Action

Examiners Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mike Amerson on 11-30-2005. The changes made below are underlined.

The Claims are amended as follows;

-- Claim 13 (Currently Amended): A method of controlling characteristics of an ion beam, the method comprising:

obtaining subsequent sets of measurement readings from a plurality of Faraday cups, each Faraday cup being arranged relative to said ion beam so as to receive a portion of said ion beam, each set of measurement readings gathered within a specified time interval, wherein each of said Faraday cups comprises:

a cup body having a bottom portion, sidewalls and an entrance aperture opposite to said bottom portion;

a first conductive region formed on said cup body and having a first detection surface oriented along a first direction; and

a second conductive region formed on said cup body, electrically insulated from said first conductive region and having a second detection surface oriented along a second direction that is different from said first direction wherein said first and second conductive regions are formed on said sidewalls in a substantially opposing relationship; and

adjusting at least one tool parameter related to said beam characteristics on the basis of said subsequent sets of measurement readings. --

Allowable Subject Matter

2. Claims 1,5-26, and 30-38 are allowed

Examiner's statement of reasons for allowance

The following is an examiner's statement of reasons for allowance:

3. Claims 1,13, and 26 are allowed because prior art fails to show an ion beam detector and method of controlling an ion beam using a plurality of Faraday cups each arranged relative to the ion beam so as to receive a portion of the beam, wherein each of the Faraday cups comprises; a cup body having a bottom portion, sidewalls and an entrance aperture opposite to said bottom portion; a first conductive region formed on said Faraday cup body and having a first detection surface oriented along a first direction; and a second conductive region formed on the Faraday cup body, electrically insulated from the first conductive region and having a second detection

surface oriented along a second direction that is different from the first direction wherein the first and second conductive regions are formed on the sidewalls in a substantially opposing relationship.

4. Claims 5-12, 14-25, and 30-38 are allowed by virtue of their dependency upon allowed claims 1, 13, and 26.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Any inquiry concerning this communication or earlier communications should be directed to Phillip Johnston whose telephone number is (571) 272-2475. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor John Lee can be reached at (571) 272-2477. The fax phone number for the organization where the application or proceeding is assigned is 571 273 8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJ
December 8, 2005



NIKITA WELLS
PRIMARY EXAMINER

12/08/05